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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,864	06/24/2003	Carlos De Barros	Q76135	7197

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EXAMINER


KALIVODA, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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2881

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s) 	
	10/601,864	DE BARROS ET AL.	
	Examiner	Art Unit	
	Christopher M. Kalivoda	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/24/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication 2003/0186944 to Riant et al. The applied reference has a common inventor and Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived

from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding independent claims 1 and 6 as claimed, Riant et al. anticipate an optical filter comprising a slanted Bragg grating inscribed in an optical fiber portion (para 13, lines 1-2) comprising a core having a refractive index n_1 and a radius R_{core} (see para 0026 and Fig 1a) and a cladding having an average refractive index n_2 lower than n_1 and a radius R_{cladding} (see para 0026 and Fig 1a), the core and the cladding doped with a photosensitive dopant (see claim 3) in the fiber portion comprising the Bragg grating, which filter is characterized in the fiber portion comprising the Bragg grating, the photosensitivity of the cladding is greater than the photosensitivity of the core (see para 0027, lines 2-4) and the cladding includes an index step area having a refractive index n_3 greater than n_2 and less than n_1 , (see Fig 1a where n_1 refers to the core n_{co} , n_2 the first cladding layer and n_3 the outer cladding layer n_{out}) said index step area having a width L defined by an inside radius R_{s1} (see Fig 1a where n_{out} begins) greater than or equal to the radius R_{core} of the core and an outside radius R_{s2} less than or equal to the radius R_{cladding} of the cladding since the outer cladding extends to the jacket.

Regarding dependent claim 2, Riant et al. teach the index difference between the core and the cladding is in the range 0.003 to 0.006 (see para 0032).

4. Claims 1 and 6 are also rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication 2003/0016912 to Riant et al referred to as Riant et al. '912. The applied reference also has a common inventor and Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding independent claims 1 and 6 as claimed, Riant et al. 912' anticipate an optical filter comprising a slanted Bragg grating inscribed in an optical fiber portion (para 23, lines 1-6 and par 4, line 1) comprising a core having a refractive index n_1 and a radius R_{core} (see Fig 1) and a cladding having an average refractive index n_2 lower than n_1 and a radius R_{cladding} (see Fig 1), the core and the cladding doped with a photosensitive dopant (see para 1, lines 7-9) in the fiber portion comprising the Bragg grating, which filter is characterized in the fiber portion comprising the Bragg grating, the photosensitivity of the cladding is greater than the photosensitivity of the core (see Fig 2) and the cladding includes an index step area having a refractive index n_3 greater than n_2 and less than n_1 , (see para 0026, lines 7-21 where n_1 refers to the core, n_2 the first cladding layer and n_3 the outer cladding layer) said index step area having a width L defined by an inside radius R_{s1} (see Fig 1 where outer layer starts) greater than or equal

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to the radius R_{core} of the core and an outside radius R_{s2} less than or equal to the radius R_{cladding} of the cladding since the outer cladding extends to the jacket.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication 2003/0186944 to Riant et al. Riant et al. teach the limitations of claim 1 as described above. However, the reference is silent with respect to the index difference between the cladding and the index step area in the range of 0.0004 to 0.001, the width of the index step area in the range of 4 microns to 20 microns and the inside radius R_{s1} being in the range from R_{core} to $R_{\text{core}} + 10$ microns.

It is not inventive to discover the optimum or workable ranges by routine experimentation (see MPEP 2144.04; In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to respect to the index difference between the cladding and the

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index step area in the range of 0.0004 to 0.001, the width of the index step area in the range of 4 microns to 20 microns and the inside radius R_{S1} being in the range from R_{core} to $R_{core} + 10$ microns.

The motivation for selecting these parameters would be to improve/optimize the shape of the filter according to characteristics of the fiber line, amplifiers and wavelengths involved (see para 0003, lines 12-15).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (571) 272-2476. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMC
cmk


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